

## ABSTRACT

A stage assembly (10) for moving and positioning a device (26) includes a guide base (12), a stage (14), a stage bearing assembly (18), a control system (22), and a Y mover (68). The stage (14) retains the device (26). The stage bearing assembly (18) supports the stage (14) spaced apart from the guide base (12). More specifically, the stage bearing assembly (18) generates an electrostatic force that urges the stage (14) towards the guide base (12). The housing mover (68) moves the stage (14) relative to the guide base (12). The Y mover (68) includes a plurality of magnets and a conductor. The magnets have a magnet length (86) and the conductors have a conductor length (88). Preferably, the magnet length (86) is at least as long as the conductor length (88) plus an X stroke (87) of the stage assembly (10). This design allows the Y mover (68) to provide a force along the Y axis over the range of the positions of the Y mover (68).

20

25

30

PATENT: PA0334-US\11269.31CIP